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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Examiner	: Roberts P. Culbert
Group Art Unit	: 1763
Appellants	: Gregory S. Marczak et al
Serial No.	: 09/899,591
Filed	: July 5, 2001
Attorney Docket No.	: 22053.75038-001
For	: ANODIZED ALUMINUM ETCHING PROCESS AND RELATED APPARATUS

MS APPEAL BRIEF-PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Enclosed in triplicate is the Appeal Brief in the above-identified application following the Notice of Appeal filed September 21, 2004.

A check in the amount of $170.00 is enclosed to cover the fee for filing the Appeal Brief.

The Commissioner is hereby authorized to charge any additional fees, or credit any overpayment to Deposit Account No. 23 0457. Two copies of this sheet are enclosed.

Respectfully submitted,

GREGORY S. MARCZAK ET AL

By: Warner Norcross & Judd LLP

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1055958

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APPEAL BRIEF

This is an appeal from a final rejection of claims 1, 3-4, 6-10, 13-17, 20, 22-23, 26-28 and 30-32 by Examiners Culbert and Mills.

I. Real Party In Interest

The real party in interest is Lorin Industries, Inc., 1960 South Roberts, Muskegon, Michigan 49443.

II. Related Appeals and Interferences

There are no related appeals, interferences or judicial proceedings known to Appellant, Appellant's legal attorney, or Appellant's assignee which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. Status of Claims

Claims 1, 3-4, 6-10, 13-17, 20, 22-23, 26-28 and 30-32 are pending and finally rejected. Appellant appeals with respect to all pending claims. Claims 2, 5, 11-12, 18-19, 24-25, 29 and 33-51 are canceled.

IV. Status of Amendments

No amendment was filed subsequent to the final rejection.

V. Summary of the Invention

A. Background

Anodized aluminum products, such as sheets and coils, are used in many applications, for example, as building materials to provide a desired building appearance, in household appliances to provide an industrial appearance, and with automotive trim to produce a unique metallic look.

Anodized aluminum products are produced by anodizing raw aluminum. Two different conventional processes used to anodize raw aluminum are: (a) sulfuric acid anodizing (SAA) or (b) phosphoric acid anodizing (PAA). Currently, when raw aluminum is anodized using either SAA or PAA, all sides or surfaces of the piece, e.g. both sides of a sheet or web, are anodized simultaneously.

Both SAA and PAA processes produce unique, but different, anodized aluminum products. For example, SAA processes produce an anodic layer on surfaces of raw aluminum

that includes many close, minute pores. These close, minute pores readily receive and retain colorant. Therefore, SAA aluminum products are readily colored and suitable for decorative applications. However, SAA aluminum products are incompatible with most adhesives due to the close pore structure. This is because the adhesive cannot infiltrate the small pores. Accordingly, it is difficult to adhere sheets of decoratively finished SAA aluminum to substrates.

PAA processes, in contrast, produce an anodic layer having widely spaced, larger pores that receive and bond well with most commercially available adhesives. Accordingly, PAA anodized aluminum products are easily adhered with adhesives to substrates. However, PAA aluminum products are very difficult to color due to the large pore structure. Therefore the color of PAA aluminum products is limited to a dull grayish finish.

Furthermore, PAA and SAA processes are not readily interchangeable. Accordingly, conventionally anodized aluminum products, such as sheets and webs, come in one of two types: (a) both sides of the sheets or coils having an adhesive capability (both sides PAA anodized), or (b) both sides of the sheets or coils having a decorative capability (both sides SAA anodized).

B. Summary of the Claimed Subject Matter

The present invention generally is directed to a process for anodizing a raw aluminum article, for example a continuous web or sheet of unanodized aluminum, sealing the anodized aluminum, then treating one side of the anodized aluminum with a composition comprising sodium hydroxide. The composition dissolves a first portion of the anodic layer on the one side to roughen a remaining portion of that anodic layer, thereby creating an adhesive-

friendly surface on that side. The anodic layer on the other side of the web or sheet remains undissolved by the composition; and thus, the anodic layer and sealant remain on this other side. Accordingly, the resulting continuous web or sheet includes a "show" side--the anodized and sealed side, as well as a "sticky" side--the sodium hydroxide-etched side, which includes large pores to which adhesives can bond.

More specifically, the process as defined in independent claim 1 requires modifying a continuous web of aluminum 100 comprising anodizing 30 the web 100 to create an anodic layer 110, and sealing the anodic layer on both sides of the web. The web 100 is advanced over a roller 60 at least partially submersed in a composition comprising sodium hydroxide 20. The roller 60 transfers the composition 20 to the first side so the composition selectively etches the first side 102, but not the second side 101. The composition 20 dissolves a first portion of the anodic layer 110 on the first side 102 and thereby roughens a remaining portion of the anodic layer. The anodic layer 110 on the second side 101 remains undissolved by the composition 20.

Defined in independent claim 13 is a process for modifying an aluminum article 100 in which the article is anodized 30 to create first and second anodized surfaces, each including an anodic layer 110. The anodic layer 110 on both of the first and second surfaces is sealed. The aluminum article is advanced over a roller 60 so that the roller 60 contacts the aluminum article and applies a composition comprising sodium hydroxide 20 to the first surface to remove a portion of the anodic layer from only the first surface 102. This creates a plurality of protrusions 120,121 to improve the adhesive strength of the surface 102. The

etching composition 20 is prevented from etching the second surface 101 of the article by maintaining the second surface 101 out of contact from the roller 60.

A process for modifying unanodized aluminum sheets or webs 100 is defined in independent claim 23. An aluminum sheet or web 100 is anodized 30 to produce a first anodized surface and a second anodized surface, each including an anodic layer 110. The anodic layers 110 of the first anodized surface and second anodized surface are sealed. The aluminum sheet or web 100 is advanced over a roller 60 so that the roller 60 contacts the sheet or web. The roller 60 is at least partially submerged in a caustic solution comprising sodium hydroxide 20. The roller 60 administers caustic solution 20 to the first anodized surface 102--but not the second anodized surface 101--to dissolve the anodic layer to create a plurality of protrusions 120,121. The remaining anodic layer provides an adhesive surface, e.g., 122. The aluminum sheet or web 100 remains un-submerged in the caustic solution 20 so that the caustic solution cannot contact the second anodized surface 101.

VI. Grounds of Rejection to be Reviewed on Appeal

A. Whether claims 1, 3-4, 6-10, 13-17, 20, 22-23, 26-28 and 32 are patentable under 35 U.S.C. §103(a) over U.S. Patent 4,624,752 to Arrowsmith et al, (the "Arrowsmith Patent") in view of the publication to Arrowsmith et al, "The enhancement of adhesive joint strength by extending the surface of anodized aluminum" (the "Arrowsmith Article"), and in further view of U.S. Patent 4,215,194 to Shepherd ("Shepherd"), U.S. Patent 4,398,994 to

Beckett ("Beckett"), U.S. Patent 4,235,682 to Schneeberger et al ("Schneeberger") and U.S. Patent 3,671,333 to Mosier ("Mosier").

B. Whether claim 30 is patentable under 35 U.S.C. §103(a) over the Arrowsmith Patent in view of the Arrowsmith Article, and in further view Shepherd, Beckett, Schneeberger, and Mosier, and in further view of U.S. Patent 3,898,095 to Berdan ("Berdan").

C. Whether claim 31 is patentable under 35 U.S.C. §103(a) over the Arrowsmith Patent in view of the Arrowsmith Article, and in further view Shepherd, Beckett, Schneeberger, and Mosier, and in further view of U.S. Patent 4,013,498 to Frantzen et al ("Frantzen").

VII. Argument

A. The Rejection of Claims 1, 3-4, 6-10, 13-17, 20, 22, 23, 26-28 and 32 Under 35 U.S.C. §103(a) Based on the Hypothetical Combination of the Arrowsmith Patent, the Arrowsmith Article and In Further View of Shepherd, Beckett, Schneeberger and Mosier is Improper and/or Unfounded, and Should Be Reversed

Claims 1, 3-4, 6-10, 13-17, 20, 22-23, 26-28 and 32 were rejected under 35 U.S.C. §103(a) as being unpatentable over the Arrowsmith Patent in view of the Arrowsmith Article and in further view of Shepherd, Beckett, Schneeberger and Mosier.

The Arrowsmith Patent is directed to a process for treating an anodized aluminum part with an acid. To begin the process, the raw aluminum part is dipped in a solution of sulfuric or chromic acid. This step hard anodizes the aluminum to produce an anodic layer which is environmentally stable and unaffected by the presence of water. Col. 2,

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Lns. 59-64. Without any further modification (due to the highly stable, hard anodized anodic layer), the hard anodized part is dipped, and subsequently etched in phosphoric, chromic or a mixture of sulfuric and chromic acids. During this step, the anodic layer is modified to comprise a "plurality of needle-like projections, considered important for good bonding." Col. 4, Lns. 59-63. Arrowsmith emphasizes that a critical feature of the invention is the "controlled dip" of the hard anodized part into the acid to develop the tailored topography for subsequent adhesive bonds--and that, for this specific process, the sulfuric acid anodizing and phosphoric acid dipping parameters have to be carefully selected. Col. 3, Lns. 38-51. Thus, it is this *controlled dip* of the hard anodized part in phosphoric acid that determines the success of the Arrowsmith etching.

The Arrowsmith Article discloses that the surfaces of an aluminum part, which have been hard anodized only, can be etched by dipping that part in a solution of sodium hydroxide. Arrowsmith Article, p. 68, Col. 1.

Shepard is directed to a process for chemically milling raw, untreated, sheet metal (with no mention of aluminum or anodized aluminum) with an etchant to create a three dimensional shape from that metal. The metal is covered with a film that includes cut-outs which allow the etchant to contact the raw metal and create the desired 3-D shape. The etchant can be applied generically to the film covered raw metal via "rolling, dipping, spraying or other suitable means." Col. 5, Lns. 25-27.

Beckett is directed to a process for treating a continuous web of *un*-anodized metal with sodium hydroxide solution by transferring that solution from a wet roller 24 to the web 12. Fig. 1; Col. 2, Lns. 18-50.

Mosier discloses that individual parts can be placed in anodizing bath, piece part anodized, and then subjected to a generic "sealing operation" to seal the anodized surface of the part. Col. 3, Lns. 22-32. Schneeberger also discloses sealing an anodic layer of an environmentally *unstable soft*-anodized aluminum part (which is naturally porous) to protect against corrosion. Col. 1, Lns. 33-37.

None of the Arrowsmith Patent, the Arrowsmith Article, Shepherd, Beckett, Schneeberger and Mosier suggest--let alone disclose or teach--several features of the present invention; nor does there exist any motivation for the combination of these references.

First, the Arrowsmith references fail to disclose, teach or suggest coloring and/or sealing the anodic layer, and then etching the anodic layer. To make-up for this deficiency, the Examiners assert that it would have been obvious to "color and seal the anodic layer [of Arrowsmith] as taught by Schneeberger et al in order to provide a decorative finish, improve corrosion resistance and prevent colorant from being washed out as taught by Schneeberger et al." Sept. 3, 2004 Office Action, p. 9.

The Appellants' attorney has reviewed the items cited by the Examiners (as well as the entire Schneeberger and Arrowsmith references) and can find no support for the Examiners' statement. Schneeberger provides that the oxide (also referred to as "anodic") layers produced by the anodizing techniques of Schneeberger:

"[A]re porous, do not offer sufficient corrosion protection, and if colored, may have the colorant washed out of them again. The oxide, therefore, has to be sealed. This so called sealing process is usually carried out in hot or boiling water, if necessary with certain additions made to the water. As a result of this process, the pores are closed off, providing improved corrosion resistance and entrapping the colorant securely in the oxide." Col. 1, Lns. 35-43.

Thus, Schneeberger seals a very specific type of anodic layer--a soft-anodic layer--which is known to be environmentally *un*stable and prone to corrosion, as pointed out in Schneeberger. In contrast, Arrowsmith addresses environmental stability in a completely different manner, namely, by hard-anodizing aluminum. Specifically, Arrowsmith teaches that the hard anodic layer created by its hard anodizing techniques is environmentally stable, corrosion and hydration resistant, and able to be stored for long periods of time. Col. 4, Lns. 43-47. Accordingly, *there is no reason to seal the hard anodized aluminum of Arrowsmith* because the anodic layer of that aluminum--as emphasized in the Arrowsmith Patent--is superior to previous anodizing techniques (such as that in Schneeberger), and is immediately environmentally stable after hard anodizing. *Id.* To further seal the already-environmentally stable Arrowsmith hard-anodized aluminum with the sealant of Schneeberger--as suggested by the Examiners--would be superfluous.

The Examiners also state that the Appellant has provided "no evidence to support the claim that sulfuric acid anodized coatings of the Arrowsmith Patent were known not to require a sealing layer." Sept. 3, 2004 Office Action, p. 5. Appellants refer to the Arrowsmith Patent at Col. 2, Lns. 59-63; Col. 3, Lns. 9-14; Col. 3, Lns. 28-32; Col. 3, Lns.

45-48; Col. 3, Lns. 63-66; and Col. 4, Lns. 43-45, where Arrowsmith specifically and repeatedly states that its hard anodized aluminum, which has a thick anodic layer, is environmentally stable, corrosion resistant and hydration resistant--and thus known *not* to require a sealing layer to protect against corrosion and hydration. If anything, Arrowsmith teaches directly away from sealing its anodic layer.

> Furthermore, the Examiners at p. 6 of the Sept. 3, 2004, Office Action assert:
>
> > [The] colorant and sealant layers do not reside on the surface of the anodized aluminum, but instead [are] trapped deep within pores in the oxide layer of the anodized aluminum (See Schneeberger et al. Columns 1-2, for example). One of ordinary skill in the art would expect that coloring and sealing layers would not be removed by the surface etching process of the Arrowsmith publication since only the outermost portion of the anodic oxide layer is etched. [Emphasis supplied.]

Appellant's attorney has carefully reviewed the above and found these statements inconsistent with the references. Specifically, Schneeberger provides that the pores of the anodic layer are hydrated during the sealing process and closed off by a velvet sealing deposit formed on the surface of that anodic layer. Col. 1, Lns. 44-47. Accordingly, the hypothetical sealing of the Arrowsmith hard-anodized anodic layer with the Schneeberger sealant *would necessarily* create a sealing layer residing both *on the surface* (contrary to the Examiners' position), and deep within the pores of the anodized aluminum. Indeed, the hypothetical combination would result in an anodic layer *completely closed-off and sealed over* by the Schneeberger velvet sealing layer. As asserted by the Examiners, however, such a sealing layer *would not* be removed with the surface etching process of Arrowsmith since only the outermost portion of the anodic

oxide layer is etched. Sept. 3, 2004 Office Action, p. 6. Indeed, with the outermost portion of the anodic layer sealed over as stated in Schneeberger, one of ordinary skill in the art would expect that the Arrowsmith etching process would be unable to etch even the outermost anodic layer. Accordingly, one of ordinary skill in the art *would not want to seal* the anodic layer of Arrowsmith in view of Schneeberger.

Second, the Arrowsmith Patent fails to disclose, teach or suggest advancing a web of aluminum over a roller, the roller at least partially submersed in an etching composition, wherein the roller transfers the composition to and selectively etches the first side but not the second side. The Arrowsmith Patent emphasizes that its main feature is a *controlled dip* (i.e., immersion) of a part in sulfuric acid to hard anodize the part, and then in phosphoric acid to etch that part. Arrowsmith emphasizes that the immersion process parameters for both anodizing and etching must be carefully selected. Col. 3, Lns. 36-51. The Examiners state that it would have been "obvious to one of ordinary skill in the art to apply the method of Arrowsmith to one side of an aluminum sheet or web using a partially submersed roller as taught by Beckett to apply an etching composition to one side of an aluminum web." Sept. 3, 2004 Office Action, p. 8.

Appellants disagree. The Examiners have merely identified a desired result (applying an etching composition to one side of aluminum sheet or web) and then asserted that Appellant's solution is obvious in view of that desired result without any reasoning. The Arrowsmith Patent in no way contemplates that its process can be modified from a *controlled dip* to a *roll-on* application (such as that in Beckett), let alone teach one of skill in the art how

this could be done without significantly altering the Arrowsmith Patent processing parameters. Indeed, the Arrowsmith Patent teaches directly against any other type of anodizing and/or phosphoric acid treatment besides *controlled dipping* because of the unique conditions that must be carefully selected for such treatment. Col. 3, Lns. 48-51. Therefore, there is no motivation to alter the whole-part immersion techniques of the Arrowsmith Patent in view of the Beckett (or Shepard) roll-on techniques.

Fourth, the Arrowsmith Patent fails to disclose, teach or suggest selectively etching one side of a web or sheet of anodized aluminum. Further, there is no teaching, suggestion or motivation supporting the modification of Arrowsmith with Official Notice to selectively etch one side of the Arrowsmith anodized aluminum. Specifically, the Examiners take Official Notice "that applications requiring a bonding surface on only one side of an aluminum substrate are old and well known in the art of producing aluminum for commercial use. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the method of Arrowsmith to one side of an aluminum sheet or web in order to provide commercial aluminum for such applications." Sept. 3, 2004 Office Action, p. 7. Appellants' attorney notes that the Official Notice taken by the Examiners merely identifies a *need* for a bonding surface on only one side of an aluminum substrate--i.e. the Office Action states that "applications requiring" such a bonding surface "are old and well known." The Examiners have identified the precise need that--before the present invention--no one was able to resolve: provide a bonding surface on only one side of an anodized aluminum substrate. If anything, this reinforces the patentability of the present invention.

Further, the Examiners have improperly relied on Official Notice without evidentiary support. M.P.E.P. §2144.03, citing *In Re Zurko*, 258 F.3d 1379, 1385; 59 U.S.P.Q. 2d 1693, 1697 (Fed. Cir. 2001). Here, the notice to fact is not well-known because the "fact" is merely an identification of an unmet need. Additionally, the concept of a bonding surface on only one side of an aluminum substrate is not well known in the art as required by 37 C.F.R. §1.111(b). The Examiners have failed to identify any reference that shows selective etching of one side of an anodized aluminum web to provide a bonding surface on only that one side. Indeed, the Examiners have impermissibly used the present specification as a road map for hindsight reconstruction of this concept to meet the "need" identified by the Examiners. Appellants therefore request the Examiners to produce documentary evidence, and/or an affidavit setting forth specific factual elements and explanation to support the finding that a selectively etched bonding surface on only one side of an aluminum substrate was known in the prior art. To the Appellants' knowledge, none exists.

Finally, Appellants point out that Arrowsmith specifically teaches against treatment of *only one side* of aluminum sheet or web. Indeed, Arrowsmith teaches that *all surfaces* of the aluminum dipped piece are etched. In the Sept. 3, 2004 Office Action at p. 4, the Examines stated that "there is nothing in Arrowsmith that teaches that all surfaces of the aluminum are etched. Arrowsmith in fact teaches away from etching all surfaces of the aluminum by indicating that the method is suitable for application to localized areas (Col. 4, lines 15-18)."

Appellants disagree. The Arrowsmith Patent explicitly states that "the main feature of this invention is a controlled dip in a solution containing phosphoric acid . . ." Col. 3, Lns. 38-51. Thus, all surfaces of the part are contacted by the phosphoric acid solution in which it is immersed. There is no suggestion that during this immersion any surface of the dipped part is prevented from being etched by the phosphoric acid, nor that only one side of the part is selectively etched. Indeed, the term "immersed," which is repeatedly used to describe the Arrowsmith treatment, means that the entire aluminum piece is dipped in a liquid so that *all* exterior surfaces are contacted by an etchant and etched to varying degrees. This definition is supported by other references cited by the Examiners, for example, U.S. Patent 3,898,095 to Berdan, which shows a web being immersed in a tank where all surfaces are contacted. Fig. 1; Col. 2, Lns. 43-63. The Examiners also note that the Arrowsmith treatment is suitable for localized areas (Col. 4, Lns. 15-18); however, this citation does not support a position that the main feature of the invention--i.e. the controlled dip--can be avoided. Appellants note that the "localized areas" can be treated by hand by immersing the entire part, including the localized area, in the phosphoric acid. Furthermore, the Arrowsmith Patent in no way discloses how hand application to localized areas could occur in the absence of immersion via a controlled dip--and in particular, how the processing parameters with the phosphoric acid dip could be carefully controlled (as necessarily required) to provide satisfactory results. Arrowsmith only teaches etching *all* surfaces of aluminum via controlled immersion.

B. The Rejection of Claims 30 Under 35 U.S.C. §103(a) Based on the Hypothetical Combination of the Arrowsmith Patent, the Arrowsmith Article and In Further View of Shepherd, Beckett, Schneeberger and Mosier, and In Further View of Berdan is Improper and/or Unfounded, and Should Be Reversed

Claim 30 was rejected under 35 U.S.C. §103(a) as being unpatentable over the Arrowsmith Patent in view of the Arrowsmith Article and in further view of Shepherd, Beckett, Schneeberger and Mosier, and in further view of Berdan. Appellants reincorporate the reasons above under Section VII, A in support of the position that claim 30 is patentable over the Arrowsmith Patent, the Arrowsmith Article and in further view of Shepherd, Beckett, Schneeberger and Mosier.

In addition, the Arrowsmith Patent, the Arrowsmith Article, in further view of Shepherd, Beckett, Schneeberger and Mosier, and in further view of Berdan fail to disclose, teach or suggest that a caustic solution is prevented from contacting a second anodized surface of a web by administering a fluid over that surface.

Berdan etches the surface of raw aluminum foil 10 with an etchant. As shown in Fig. 1, the raw foil 10 passes into the tank 14 which includes an alkaline etchant. There, both sides of the raw aluminum foil 10 are contacted with the etchant. After immersion in the tank 14, the aluminum foil 10 undergoes an etching reaction on all of its surfaces. Col. 3, Lns. 16-21. Thus, the etching composition *necessarily* contacts and etches both sides of the foil. Only *after* contact of the etchant with the foil, and after some etching has occurred, is water applied via manifolds 22 against the surfaces of the foil to inhibit the etching. Thus, like the Arrowsmith Patent, all surfaces in Berdan are contacted by the etchant and etched--there is no prevention of such contact.

C. The Rejection of Claims 31 Under 35 U.S.C. §103(a) Based on the Hypothetical Combination of the Arrowsmith Patent, the Arrowsmith Article and In Further View of Shepherd, Beckett, Schneeberger and Mosier, and In Further View of Frantzen is Improper and/or Unfounded, and Should Be Reversed

Claim 31 was rejected under 35 U.S.C. §103(a) as being unpatentable over the Arrowsmith Patent in view of the Arrowsmith Article and in further view of Shepherd, Beckett, Schneeberger and Mosier, and in further view of Frantzen. Appellants reincorporate the reasons above under Section VII, A in support of the position that claim 31 is patentable over the Arrowsmith Patent, the Arrowsmith Article and in further view of Shepherd, Beckett, Schneeberger and Mosier.

In addition, the Arrowsmith Patent, the Arrowsmith Article, in further view of Shepherd, Beckett, Schneeberger and Mosier, and in further view of Frantzen fail to disclose, teach or suggest preventing the etching composition from contacting and etching the second side by covering the second side with a protective shield.

The Examiners rely on Frantzen for the prevention of unwanted etching of the second side. Frantzen is directed to a process for chemically boring openings completely through a piece of material using a reusable shield 30. The etchant of Frantzen necessarily contacts the second side because the etchant chemically bores holes completely through the material, i.e. through the first side and through the second side. Col. 1, Lns. 61-65; Col. 3, Lns. 34-39. Thus, the caustic solution of Frantzen is *not prevented from contacting* to the second surface of material--instead Frantzen necessarily chemically bores a hole completely through that second surface.

Furthermore, there is no motivation to combine the Arrowsmith references and Frantzen because Arrowsmith is directed to modifying the outer surface of an aluminum article to resist hydration, whereas Frantzen is directed to completely boring a hole through an aluminum article.

VIII. Conclusion

In summary, the Examiner's rejections are improper and/or unfounded, and should be reversed. The references are not properly combinable, and even if those references were somehow combined as noted above, they do not disclose, teach or suggest the invention as defined in the claims.

Respectfully submitted,

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IX. Claims Appendix

1. (previously presented) A process for modifying a continuous web of aluminum comprising:

providing a continuous, unanodized web of aluminum including a first side and a second side;

anodizing the web to create an anodic layer on each of the first side and the second side;

sealing the anodic layer; and

advancing the web over a roller, the roller at least partially submersed in a composition comprising sodium hydroxide, wherein the roller transfers the composition to and selectively etches the first side, but not the second side, wherein the composition dissolves a first portion of the anodic layer on the first side and thereby roughens a remaining portion of the anodic layer created during said anodizing on the first side, wherein the anodic layer on the second side remains undissolved by the composition.

2. (cancelled)

3. (previously presented) The process of claim 1 wherein the web remains unsubmerged in the composition as the web is advanced over the roller.

4. (previously presented) The process of claim 1 wherein only the first side of the web contacts the roller as the composition is transferred from the roller to the first side.

5. (cancelled)

6. (previously presented) The process of claim 1 comprising coloring the first side and second side before said advancing step.

7. (previously presented) The process of claim 1 wherein the etching composition dissolves the anodic layer so that the anodic layer includes a bonding layer of about 4-10 nanometers in depth.

8. (previously presented) The process of claim 1 wherein said sealing is performed before said advancing.

9. (previously presented) The process of claim 1 wherein the etching composition is sodium hydroxide of about 0.1 molar to about 0.5 molar.

10. (original) The process of claim 9 wherein the first side is exposed to the etching composition for about 20 to about 60 seconds.

11.- 12. (cancelled)

13. (previously presented) A process for modifying an aluminum article comprising:

anodizing an aluminum article to produce first and second surfaces, each including an anodic layer;

sealing the anodic layer of the first and second surfaces;

advancing the aluminum article over a roller so that the roller contacts the aluminum article and so that an etching composition comprising sodium hydroxide is applied from the roller to the first surface to remove a portion of the anodic layer from only the first surface, thereby creating a plurality of protrusions to improve the adhesive strength of the surface;

preventing the etching composition from etching the second surface of the article by maintaining the second surface out of contact from the roller.

14. (previously presented) The process of claim 13 comprising coloring the at least one surface before said advancing step.

15. (previously presented) The process of claim 13 wherein the roller is partially submerged in the composition during the advancing step.

16. (previously presented) The process of claim 13 wherein the article is unsubmerged in the etching composition during the advancing step.

17. (previously presented) The process of claim 14 wherein the second side remains uncontacted by the etching composition during the advancing step.

18.-19. (cancelled)

20. (original) The process of claim 13 wherein the aluminum article is a structure selected from a web and a sheet.

21. (cancelled)

22. (previously presented) The process of claim 20 wherein after said advancing step, the first side has the property of cohesive bond failure at about 30 to about 60 pounds per square inch in a tensile pull tester operating with a crosshead speed of 10 inches per minute, and the second side includes a colored, decorative finish.

23. (previously presented) A process for modifying unanodized aluminum sheets or webs comprising:

providing an aluminum sheet or web;

anodizing the aluminum sheet or web to produce a first anodized surface and a second anodized surface, each including an anodic layer;

sealing the anodic layer;

advancing the aluminum sheet or web over a roller so that the roller contacts the sheet or web, the roller at least partially submerged in a caustic solution comprising sodium hydroxide; and

administering the caustic solution to the first anodized surface, but not the second anodized surface, with the roller to dissolve the anodic layer of the first anodized surface a pre-selected amount and to create a plurality of protrusions extending from the remaining anodic layer so that the protrusions and the remaining anodic layer provide an adhesion surface, wherein the aluminum sheet or web remains unsubmerged in the caustic solution so that the caustic solution cannot contact the second anodized surface.

24.-25. (cancelled)

26. (previously presented) The process of claim 23 comprising coloring the first anodized surface before said administering step.

27. (original) The process of claim 26 wherein the caustic solution is applied at a temperature ranging from about 60°F to about 212°F.

28. (original) The process of claim 26 wherein the caustic solution is applied at a temperature range from about 100°F to about 200°F.

29. (cancelled)

30. (original) The process of claim 23 wherein the caustic solution is prevented from contacting the second anodized surface by administering a fluid over the second anodized surface.

31. (original) The process of claim 23 wherein the caustic solution is prevented from contacting the second anodized surface by positioning a shield adjacent the second anodized surface as the as the caustic solution is applied to the first anodized surface.

32. (original) The process of claim 23 wherein the first anodized surface is exposed to the caustic solution for about 20 to about 60 seconds.

33-51. (cancelled)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Examiner	: Roberts P. Culbert
Group Art Unit	: 1763
Appellants	: Gregory S. Marczak et al
Serial No.	: 09/899,591
Filed	: July 5, 2001
Attorney Docket No.	: 22053.75038-001
For	: ANODIZED ALUMINUM ETCHING PROCESS AND RELATED APPARATUS

MS APPEAL BRIEF-PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF MAILING

I hereby certify that the attached Appeal Brief (in triplicate) and fee of $170 are being deposited with the United States Postal Service as first class mail in an envelope addressed to:

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on November 22, 2004.

Respectfully submitted,

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